CLAIMS

What is Claimed:

38. A method for taxonomic identification of a biological analyte comprising:

(a) exposing the solution containing the analyte to a ligand specific for the analyte of interest that has been conjugated to a marker;

(b) separating the bound analyte from the excess marker-conjugated ligands;

(c) interrogation of the analyte for ligand binding via detection of the conjugated marker.

39. The method of claim 38, wherein the biological analyte is selected from the group comprised of:

(d) bacteria;

(e) viruses;

(f) proteinaceous toxin;

(g) rickettsiae;

(h) protozoa;

(i) fungi; and

(j) cytosolic protein.

40. The method of claim 38, wherein the separation of the bound analyte from the excess conjugated ligand is accomplished by chromatography.

41. The method of claim 38, wherein the ligand is conjugated to a magnetic particle and the separation of the bound analyte from the non-binding components of the analyte solution is accomplished by magnetic separation with the ligand being tethered to the magnetic particle by at least fifteen Å for capture of microorganisms.

42. The method of claim 38, wherein the ligand is a heme compound.

43. The method of claim 38, wherein the ligand is a siderophore.

44. The method of claim 38, wherein the ligand is a polysaccharide.

45. The method of claim 38, wherein the ligand is a peptide specific for an outer membrane protein.

46. The method of claim 38, wherein the ligand is a peptide specific for a conjugated lipid.

47. The method of claim 38, wherein the marker is fluorescent and the detection is via fluorescence.

48. The method of claim 38, wherein the marker is luminescent and the detection is via luminescence.

49. The method of claim 38, wherein the marker is radioactive and the detection is via radioactivity.

50. The method of claim 38, wherein the marker is phosphorescent and the detection is via phosphorescence;